

GREENPEACE

THIS FAR, NO FURTHER

Protect the Arctic
from destructive
trawling

DEFEND THE DEEP



SUMMARY

Investigations by Greenpeace have shown industrial fishing fleets using destructive bottom trawling are invading previously pristine areas of the Barents Sea in the Norwegian Arctic.

The icy waters of the northern Barents Sea are home to a huge diversity of marine life, including bowhead whales, walrus and polar bears, along with rare fish and invertebrates. Many more species doubtless remain to be discovered in this remote area.

As climate change steadily diminishes the extent and annual duration of the sea ice, this and other areas of the Arctic Ocean that were previously ice-covered for all or much of the year are becoming accessible to commercial exploitation. Sea ice loss in the northern Barents Sea is turning it into a new hunting ground for industrial fishing. Fishing brings with it the threats of habitat degradation and bycatch, potentially wiping out marine life and putting this whole fragile ecosystem at risk.

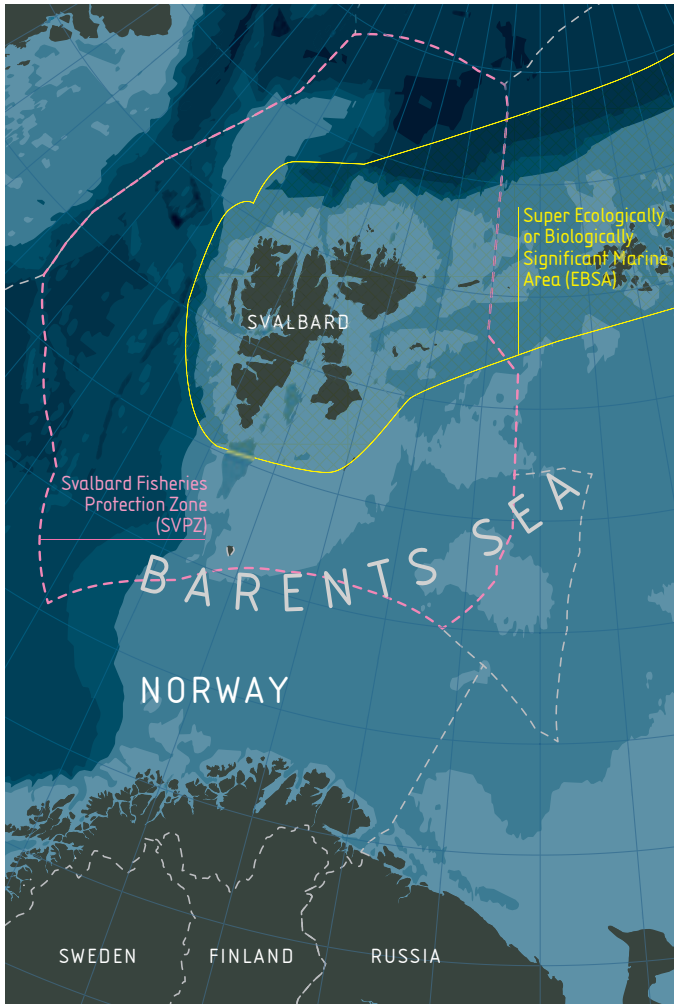
A groundbreaking Greenpeace investigation focused on part of the Norwegian Barents Sea, including an analysis of vessel movements over three years to September 2015, has shown that large numbers of fishing vessels from companies with a global reach have been advancing into areas previously covered by ice.

These companies feed a network of processors, exporters and distributors that supply seafood to markets in Europe, Asia and North America, including major supermarkets and household-name fish brands as well as the popular UK fish and chip trade.

The fishing companies and processors involved pride themselves on operating in or sourcing from a well-managed fishery – a pride shared by the Norwegian government. Indeed, the Barents Sea cod stock is one of the healthiest cod stocks in the world.

Yet the largely unexplored and vulnerable northern part of the Barents Sea ecosystem is at the mercy of destructive fishing practices, due to the current lack of action to protect it by the Norwegian government or the fishing and processing companies.

As well-known food brands and retailers around the globe, whose reputations rely on responsible sourcing, realise that their supply chains are at risk of being tainted with Arctic destruction, Greenpeace calls on them to bring pressure on the Norwegian government and the fishing companies involved to leave these pristine waters alone.



A NEW OCEAN AT THE TOP OF THE WORLD

There are a number of major ecosystems worldwide that are still little affected by human activity, where it is not too late to turn the tide of our unprecedented impacts on the global climate and the biosphere. For the time being, the Arctic marine ecosystem is one of these. However, climate change is already affecting the Arctic heavily, with the rate of warming in the region twice the global average.¹ This warming is causing the extent and duration of sea ice cover to diminish. In January 2016 the Arctic sea ice extent was the lowest in the satellite record,² influenced by unusually high air temperatures over the Arctic Ocean. The effects of the warming are visible on land too: permafrost is thawing, glaciers are melting and the massive Greenland Ice Sheet is losing ice at record rates.³ Moreover, as well as driving global warming, increased atmospheric carbon dioxide levels resulting from human activity are leading to seawater in the Arctic and elsewhere becoming more acidic as it absorbs the excess carbon dioxide.

These major changes are altering the ecology of the Arctic Ocean and are already presenting formidable challenges to the region's peoples and wildlife. Furthermore, with more areas free of sea ice for longer periods, the Arctic Ocean is becoming

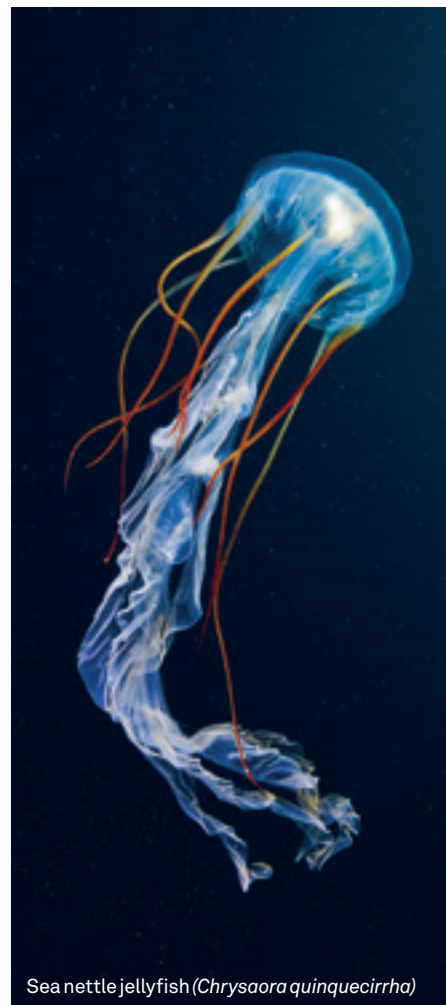
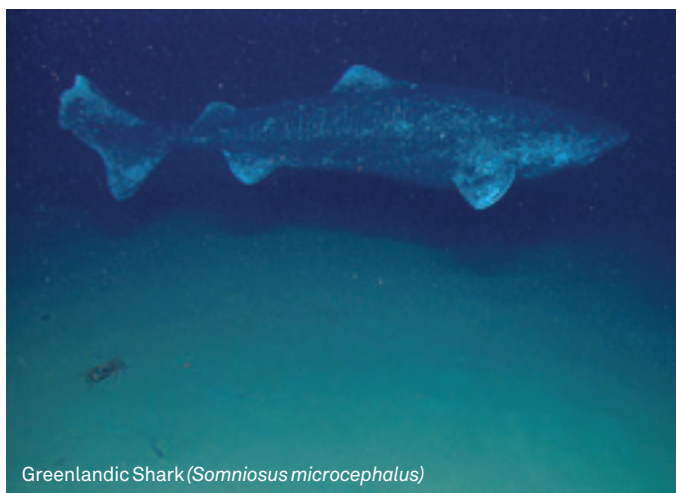
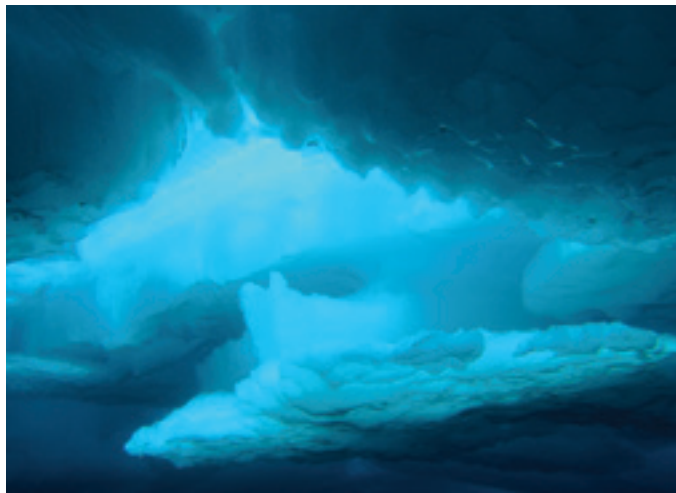
increasingly accessible, exposing the seabed and the entire ecosystem to human activities on an unprecedented scale.

It is not only the oil industry that is encroaching on the Arctic – industrial-scale fishing interests are venturing to higher latitudes than ever before and setting their sights on a potential fishing bonanza in these once inaccessible waters as the fish populations themselves begin to extend their range further north.⁴

States whose waters are affected by the retreat of the ice have been slow to respond to the environmental threats posed. So far the USA stands out for its 2009 decision to impose a precautionary moratorium on commercial fishing in the US portion of the Beaufort Sea, north of Alaska. However, other Arctic coastal states lag behind. In the Barents Sea, north of Norway and Russia, the fishing industry is starting to push further and further north into previously unfished areas in the wake of the receding ice, menacing a pristine and sensitive ecosystem whose global ecological importance has been acknowledged by the scientific community.

THE BARENTS SEA: A WONDERLAND ONCE HIDDEN UNDER THE ICE

The Barents Sea is one of Europe's last large marine ecosystems that remains relatively clean. The inflow of warm Atlantic water keeps the southern parts of the sea ice-free all year round and also supports high biological productivity. Because the water is shallow, vertical mixing normally takes place right down to the bottom in winter, carrying nutrients up to the surface waters, where they sustain an abundant bloom



Greenlandic Shark (*Somniosus microcephalus*)

Sea nettle jellyfish (*Chrysaora quinquecirrha*)

of phytoplankton in spring.⁵

As a result, the Barents Sea supports a rich diversity of life, including some of the world's largest colonies of seabirds such as Atlantic puffins (*Fratercula arctica*) and guillemots (*Uria aalge* and *U. lomvia*), rich seafloor communities including kelp forests and numerous deep-water coral reefs, as well as marine mammals such as walrus (*Odobenus rosmarus*), whales and polar bears (*Ursus maritimus*).⁶

There are more than 200 fish species in the Barents Sea, but the most important one in commercial terms is the Atlantic cod (*Gadus morhua*). The Barents Sea cod stock is currently the largest cod stock in the world,⁷ and the cod fishery in the southern and central portion of the sea, including along the coast of the Norwegian mainland, has sustained fishing communities for centuries. The Barents Sea cod spawn along the coast of mainland Norway and the larvae then drift north to the waters north and east of Svalbard, where the juvenile cod feed and grow until they in turn make their way south to spawn. But cod is not the only commercially fished stock in the Barents Sea: the haddock (*Melanogrammus aeglefinus*), saithe (*Pollachius virens*), northern prawn (*Pandalus borealis*), capelin (*Mallotus villosus*) and Greenland halibut (*Reinhardtius hippoglossoides*) fisheries are also important. The Barents Sea is also a nursery ground for the Norwegian spring-spawning herring (*Clupea harengus*) stock, which was for some years the largest commercially exploited fish stock in the world.⁸

At the far north-west of the Barents Sea, where it adjoins the Greenland Sea and the central Arctic Ocean, is the Svalbard archipelago. It lies about midway between

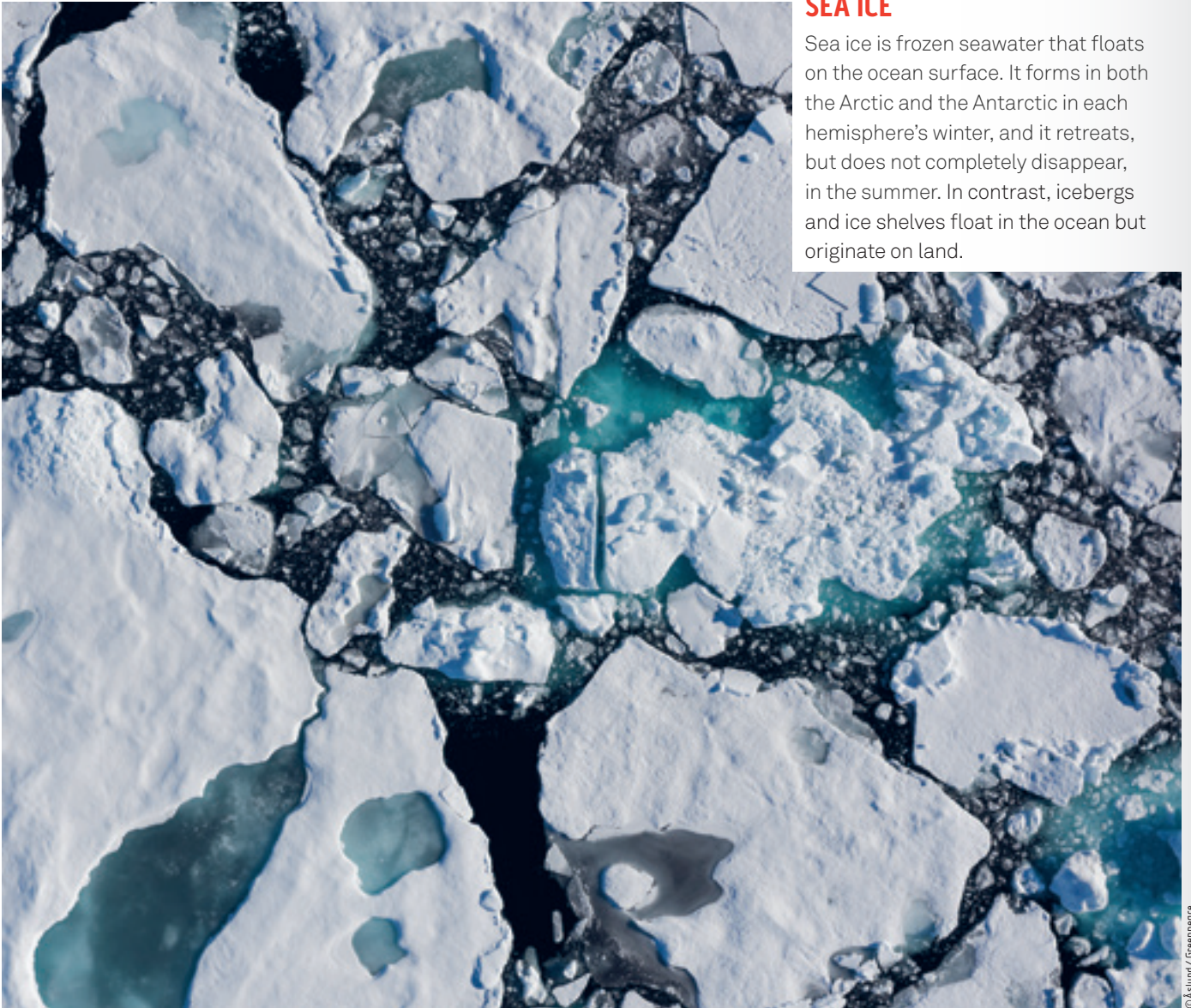
mainland Norway and the North Pole, and consists of three main islands: Spitsbergen (the largest), Nordaustlandet and Edgeøya. During the summer months the area teems with life, including millions of seabirds, seals, cetaceans such as the elusive bowhead whale (*Balaena mysticetus*), polar bears and walrus. The sea around north-east Svalbard is a particularly productive area for fish, seabirds and marine mammals and an important summer feeding area for blue (*Balaenoptera musculus*), beluga (*Delphinapterus leucas*) and humpback (*Megaptera novaeangliae*) whales as well as narwhal (*Monodon monoceros*).⁹

Since the waters around Svalbard have historically been covered by sea ice for most of the year, making access difficult, little has been known until recently about what lies under the surface. In recent years, however, increased effort has gone into mapping the seabed and the species living there. A Greenpeace investigation in 2010 using a drop camera revealed that there is much more under this part of the sea than the sand and mud that has sometimes been suggested by Norwegian fishermen and fisheries bureaucrats. A 2015 study into the vulnerability to trawling of seabed fauna off Svalbard¹⁰ showed that many areas host species such as the sea pen (*Umbellula encrinus*) and the basket star (*Gorgonocephalus arcticus*) that are highly vulnerable to bottom trawling. The study found aggregations of sea pens up to 50 years old and over two metres in height. Sea pen communities form habitats for fish and other species and are included in the OSPAR Commission's¹¹ List of Threatened and/or Declining Species and Habitats.¹²

MELTING FAST

SEA ICE

Sea ice is frozen seawater that floats on the ocean surface. It forms in both the Arctic and the Antarctic in each hemisphere's winter, and it retreats, but does not completely disappear, in the summer. In contrast, icebergs and ice shelves float in the ocean but originate on land.



© Astlund / Greenpeace

The Barents Sea is one of the areas of the Arctic Ocean worst affected by sea ice loss. Research suggests that the winter sea ice edge in the eastern Barents Sea retreated about 240 km between 1979 and 2010 and that the annual mean sea ice area in the entire Barents Sea decreased by about 50 per cent during the decade to 2008,¹³ while the annual reduced-ice period here has become at least 20 weeks longer since 1979.¹⁴ The dynamics of the sea ice changes in the Barents Sea suggest that it is not the summer melt season that is the main driver of the decline but a reduction in freezing during the winter, which is making fishing in the northern portion of the sea possible for longer periods of the year, including the winter months.¹⁵

Industrial fisheries moving into the newly accessible areas pose a serious threat to seabed communities.

The 2015 study of seabed fauna off Svalbard referred to above showed a clear decline in biomass for all species in trawled areas as compared with untrawled areas, with the decline being 'strongest for the most vulnerable taxa by almost one order of magnitude, suggesting that trawling significantly affects the biomass of all species and predominantly the biomass of the most vulnerable ones'.¹⁶ Fifty-year-old sea pen aggregations such as those found by the study can be wiped out in seconds by bottom trawling, along with the communities of other organisms that depend on them. Commercial fishing will also directly affect non-target fish populations in the area, as they begin to be taken as bycatch. These impacts will undermine the resilience of the marine ecosystem, reducing its ability to cope with the stresses caused by increasing temperatures and ocean acidification.

THE NEXT BIG THREAT: TRAWLING AROUND SVALBARD

THE SVALBARD FISHERIES PROTECTION ZONE

Norway gained full sovereignty of the Svalbard archipelago through the Svalbard Treaty of 1921,¹⁷ prior to which it was *terra nullius* (nobody's land).¹⁸ In 1977 Norway established a Fisheries Protection Zone (FPZ) around Svalbard, extending 200 nautical miles from its shores. The main purpose of the zone is to control fishing activity around the archipelago in order to conserve fish stocks and secure the long-term viability of fisheries. Fisheries in the Barents Sea portion of the FPZ as well as in the remainder of the Barents Sea are managed by the Joint Norwegian–Russian Fisheries Commission, established in 1974, which sets the quotas for cod and other commercially important fish stocks (haddock, capelin and Greenland halibut). Quotas are shared between the two countries, with a portion also being allocated to other countries. Sadly, the management of the Svalbard FPZ does not include adequate measures to protect the area's biodiversity: for example, fishing vessels are allowed to operate near huge seabird breeding colonies and polar bear denning areas. Polar bears have been observed eating waste such as plastic items left behind by fishing vessels and have on occasion become entangled in lost or discarded fishing gear, see photo here.



© Christian Bjørke



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BOTTOM TRAWLING

One of the most environmentally destructive of all fishing methods is bottom trawling, used to catch fish such as cod and flatfish that live on or close to the seabed. The biggest bottom trawl nets measure about 70 metres in width and 100 metres in length. Weighted with heavy metal rollers, they smash and crush everything in their path. In the Barents Sea the brunt of this destruction is borne by seabed fauna including sea pens, sponges and corals that give food and shelter to vast numbers of other species, such as juvenile cod. Further south in Norwegian waters it is estimated that between 30 and 50 per cent of coral (*Lophelia pertusa*) reefs have been impacted by fishing activities, in particular by bottom trawling.¹⁹

THE BARENTS SEA COD FISHERY



Trawlers docked in Norway

© Rose / Greenpeace

The Barents Sea cod fishery is among the largest fisheries in the world. It is worked by a fleet of small vessels fishing mainly along the Norwegian coast using passive gear types such as gill nets, longlines and Danish seines, along with an ocean-going fleet mostly using bottom trawls. According to the Norwegian Directorate of Fisheries a total of 189 trawlers hold licences to fish for cod and haddock in the Barents Sea in 2016: 96 Russian, 48 from EU countries, 30 Norwegian, eight Icelandic, four from the Faroe Islands and three from Greenland.²⁰

The Norwegian fishing fleet's entire cod catch is landed on the Norwegian mainland, with a number of trawlers being obliged to land their catch in northern Norway as a condition of their quota, to ensure local employment. The majority of fish landed is then exported for processing, either elsewhere in Europe (mainly Denmark, Poland and Portugal) or to Asia (mainly China and Vietnam), before being shipped to consumer markets. The Russian trawler fleet operates differently, as most of its catch is trans-shipped at sea from the fishing vessels onto freezer ships. The majority of these trans-shipments happen around Belsund, a fjord in south-west Svalbard and around Bear Island. The fish is then either sent to Murmansk in northern Russia or exported to Western Europe, with most of the latter ending up in Velsen in the Netherlands, where it is kept in frozen storage until it is distributed for processing into products such as plain or breaded fillets and fish fingers.²¹

OVERALL QUOTA FOR BARENTS SEA COD IN 2016

The overall 2016 Barents Sea cod (also known as Northeast Arctic cod) quota was agreed at the 45th session of the Joint Norwegian–Russian Fisheries Commission meeting in Astrakhan, Russia, on 9 October 2015. The quota was set at 859,000 tonnes, divided between Norway, Russia and other countries, as shown in the table. The other countries are permitted to take only 35,200 tonnes of their total cod quota inside the FPZ, though there is no such restriction on Norway or Russia.²²

Quota distribution between Norway, Russia and other countries for 2016

	TOTAL	OTHERS	NORWAY	RUSSIA
COD (TONNES)	859,000	124,520	367,240	367,240

'Other countries' includes quota allocated to the EU (Germany, the UK, Ireland, Portugal, Spain, the Netherlands and France), Iceland, Greenland and the Faroe Islands.

FROM THE BARENTS SEA TO THE WORLD



BARENTS SEA COD: A KEY STOCK

The Barents Sea cod stock accounts for 70 per cent of the advisory total allowable catch (TAC) of Atlantic cod for 2016 set by the International Council for the Exploration of the Seas (ICES)²³ – making the fishery the main source of Atlantic cod. Enough cod from the Barents Sea are being landed to provide almost three billion fish meals per year.²⁴ In 2015, Norway exported 205,000 metric tonnes of cod, with a record value of approximately NOK 7.88 billion (US\$900 million).²⁵ According to the Norwegian Seafood Council, a public company owned by the Norwegian Ministry of Fisheries and Coastal Affairs, over 90 per cent of Norwegian cod catches are of Barents Sea cod.²⁶

Working to identify opportunities for Norwegian seafood products in both new and established markets, the NSC has representatives in Sweden, the UK, Germany, France, Spain, Portugal, Italy, Brazil, Japan, Singapore, China and the USA.²⁷

While export data for Russia is less accessible, it is known that the Russian Barents Sea cod fishery primarily supplies foreign markets.²⁸ Russia has the same Barents Sea cod quota as Norway for 2016, which leads to an estimate that about half a million tonnes of Barents Sea cod are entering the global seafood market each year.

THE UK: HUNGRY FOR COD

According to the UK National Federation of Fish Friers, 'Fish and chips are the undisputed national dish of Great Britain, becoming a cultural and culinary symbol of our country,

instantly recognised as British the world over.'²⁹

The UK is the world's biggest market for cod, importing almost 115,000 tonnes in the year to August 2015.³⁰ All major UK retailers source cod from the Barents Sea.³¹ Cod accounts for almost a third of all fish servings in the UK food service sector.³²

Frozen at sea (FAS) describes fish that has been caught, processed, packed and deep-frozen on board the vessel soon after being caught. When it comes to fish and chips, the Frozen at Sea Fillets Association reports that over 95 per cent of fish and chip shops in the UK 'will use FAS fillets exclusively for all the cod and haddock they sell'.³³ 'The UK industry organisation Seafish reports that cod accounts for almost a third of all fish servings in the UK food service sector, and that around 95 per cent of the cod sold by UK fish and chip shops is caught in the Barents Sea or off Iceland.'³⁴

The 10,500 fish and chip shops across the UK, where cod and haddock are the most popular choices, are patronised by 22 per cent of the UK's population every week and serve some 380 million meals a year.³⁵ Norwegian industry representatives state that 'the fish and chip sector in the UK remains vital to Norway'.³⁶

The UK market is likely to be equally important to the Russian fleet operating in the Barents Sea.



Atlantic cod (*Gadus morhua*)

FISHING ON THE ICE EDGE

FISHING VESSELS TRACKED HEADING NORTHWARDS

Greenpeace has kept a close eye on the fishing fleets in the Barents Sea, and especially on movements in the northern parts of the sea, since our involvement in the exposure of illegal fishing back in 2006. The presence of vessels operating around Svalbard has rung alarm bells about an upcoming expansion.

By 2010 the illegal fishing had stopped, but Greenpeace continued to document destructive fishing in the area. The Greenpeace ship *Esperanza* encountered 10 Russian trawlers fishing in a cluster at 79°N near the west coast of Svalbard in 2010 and also spotted a Norwegian fishing vessel at 80°N, north of Svalbard.

In order to quantify any northward expansion of the Barents Sea fishery, Greenpeace analysed catch data obtained from the Norwegian Directorate of Fisheries and concluded that an increasing proportion of the cod taken in the Barents Sea by the Norwegian trawl fleet is indeed caught in the north-west of the sea, within the Svalbard Fisheries Protection Zone. **Cod reported as caught by the Norwegian fleet in this area represented less than 2 per cent of the total Norwegian quota for the entire Barents Sea in 2001, but this has increased year on year to close to 11 per cent in 2014, the last year for which complete and verified figures were available.³⁷ This clearly indicates a northward trend in fishing activity, even if the catch in this area is still only a relatively small fraction of the total take.**

In addition, Greenpeace obtained details of vessel movements over 75°N during the period September 2012 to September 2015, derived from the Automatic Identification System (AIS).³⁸ This latitude was chosen so as to exclude the well-established fishing grounds in the central Barents Sea. To further narrow the investigation, another filter was chosen at 78°N, since much of the sea north of this latitude in Norwegian waters lies within the 'Super Ecologically or Biologically Significant Marine Area' identified in 2011 (see page 4) and is covered with sea ice in winter. Vessels recorded as travelling at 5 knots or below (typical trawling speed)³⁹ were assumed to be engaged in trawling. This conclusion was supported by the latitudes they were recorded in at that speed. This map shows so

Data analysis of almost 18 million location signals indicates that over the three-year period, more than a hundred vessels licensed to fish in the Norwegian portion of the Barents Sea went above 78°N – and were presumably trawling. Additionally, our analysis estimates that on average they spent 1 in 10 of their days at sea inside the ecologically significant

HAVFISK ASA

Havfisk holds approximately 11 per cent of the entire Norwegian quota for white fish.⁴⁰ Its fleet currently consists of 10 trawlers: one fresh-fish trawler, four freezer trawlers and five combination trawlers (fresh-fish trawlers with freezing capacity).⁴¹ According to the company website, 'The cod we catch belongs to the Northeast Arctic population and lives most of [its] life in the Barents Sea.'⁴²

Greenpeace's analysis of vessel movements between September 2012 and September 2015 indicates that all of the 11 vessels owned by Havfisk during this time fished above 75°N, and half of these vessels also went above 78°N.⁴³

OCEAN TRAWLERS

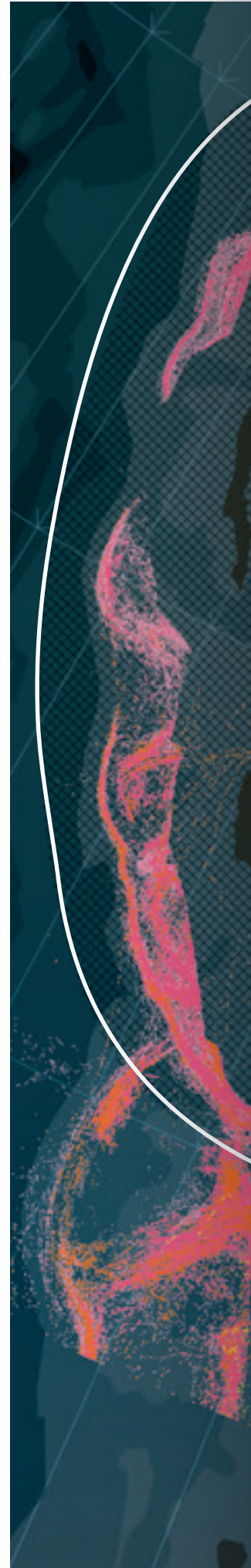
Part of the Russian Karat Group, Ocean Trawlers claims to be the world's largest supplier of North Atlantic cod and haddock, trading only fish fresh-frozen at sea.⁴⁴ More than 30 vessels fish for Ocean Trawlers and the annual catch is 300-400,000 tonnes.⁴⁵ The company states that every fishing vessel in its fleet is 'an independent floating factory'.⁴⁶

Greenpeace's analysis of vessel movements between September 2012 and September 2015 indicates that in this time at least 19 vessels fishing for Ocean Trawlers fished above 75°N, half of which also trawled above 78°N.⁴⁷

FIUN

FIUN was established in December 1992. It has become one of the leading fishing associations in the Russian northern basin and the largest union of small and medium-sized fishing enterprises in Russia, with over 40 vessels operating in the Barents Sea.⁴⁸ A representative from FIUN has stated that 'The Barents Sea has always been the pride of our region and the meaning of life for us' and that the fishery's main target 'is to preserve its resources for generations to come.'⁴⁹

Greenpeace's analysis of FIUN's vessels' movements between September 2012 and September 2015 indicates that in this time at least 38 vessels fishing for FIUN fished above 75°N, over half of which (23 vessels) also fished above 78°N.⁵⁰



AIS tracks for vessels owned by **Havfisk**, **Ocean Trawlers** and those connected to **FIUN** in the Norwegian portion of the Barents Sea above 78°N and travelling at a speed of 5 knots or below (typical trawling speed) on five or more days in total during the three years to 11 September 2015. Days were counted when at least three signals were recorded on the same day, to help rule out AIS transmission errors. These vessel's tracks at between 75° and 78° are also shown.



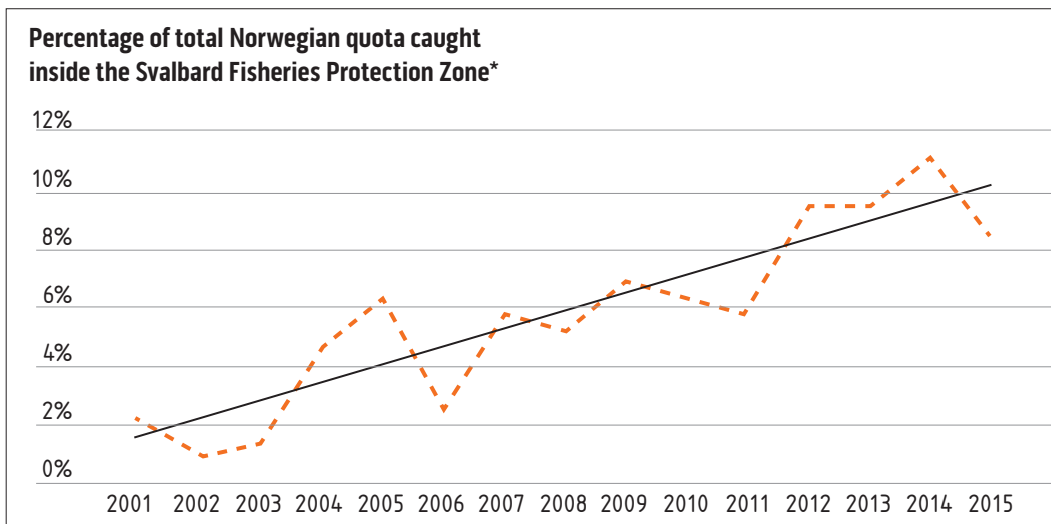
Super Ecologically or Biologically Significant Marine Area (EBSA)

80°

78°

76°

KEY FISHING OPERATORS IN THE BARENTS SEA



*Catch reported from locations 22, 23 and 24 inside the SFPZ, see endnote 37 on p19.

A total of 189 trawlers have licences to fish for cod and haddock in the Barents Sea in 2016, with Russia and Norway having the biggest share of the quota.⁵¹ Among the fishing operators in the Barents Sea, three stand out:

- **Havfisk ASA**, the largest Norwegian operator, formerly known as Aker Seafood ASA⁵²
- **Ocean Trawlers**, Russian-owned but based in Hong Kong⁵³
- **Fishing Industry Union of the North (FIUN)**, a leading Russian fishing association.⁵⁴

Greenpeace's investigations found that vessels from all these operators had engaged in fishing activities in the Barents Sea above 78°N.

These operators, as well as others venturing into the icy and previously unfished waters of the northern

Barents Sea, supply a network of distributors and fish processors in Europe and Asia that in turn sell fish products from the Barents Sea to retailers, restaurants and other food outlets all over the world.

While the data shows that fishing vessels are clearly entering the far reaches of the northern Barents Sea, so far this constitutes a small portion of their time at sea above 75°N. It can be assumed, therefore, that these companies can still meet their quotas without venturing further north. However, as the sea ice retreats, there is nothing to stop vessels from establishing a year-round fishery in these sensitive areas. Preventive measures are a necessary, reasonable and urgent step to protect these areas.

RESPONSIBLE SOURCING OR SUPPLY CHAIN AT RISK?

As the northward expansion of the Barents Sea cod fishery begins to threaten the sustainability credentials and reputation that the fishery has enjoyed since it was reformed nearly a decade ago, major processors, seafood brands and the food service sector around the world risk having their supply chains tainted with Arctic destruction.

ESPERSEN

Europe's biggest cod processor, the Danish company **Espersen**, has an international reputation in the industry as a responsible company. It supplies brands, retailers and the food service sector throughout Europe and the USA.⁵⁶

Espersen is linked to the Barents Sea cod fishery through the white fish it sources from various suppliers,⁵⁷ as well as through its shares in **Norway Seafoods** (12 per cent holding)⁵⁸ and **Scanfish Norway** (49 per cent holding)⁵⁹ – two of **Havfisk's** top five customers.⁶⁰ Norway Seafoods AS's main shareholder, **Converto Capital Fund**, is controlled by **Aker ASA**, which also controls Havfisk. Norway Seafoods was Havfisk's top customer in 2014, when 50 per cent of Havfisk's fish sales went to just five companies – Scanfish Norway being the third biggest buyer.⁶¹ In 2015, Espersen took over the frozen value-added processing (VAP) customer agreements from the Danish subsidiary of Norway Seafoods.⁶² Scanfish Norway exports fresh and frozen white fish to a few large customers in Denmark, Lithuania, Poland and Asia, all home to Espersen processing plants.⁶³

OCEAN TRAWLERS

With a fully integrated supply chain, **Ocean Trawlers** not only fishes the Barents Sea but is responsible for the marketing of around 300,000 tonnes of fish a year under the Ocean Trawlers and **Atlantika** brands.⁶⁴ Through sales offices in the UK, Germany and the USA, it supplies

'It is well recognised that the majority of Norway's major and commercially important stocks are in good condition, and we are best served by ensuring that they stay that way. Not only because it ensures the future for the industry, but also because consumers in our main markets attach importance to choosing sustainable food.' Norwegian Seafood Council⁵⁵

FAS products to distributors and processors that sell to the food service sector, fishmongers, wholesalers and supermarket chains in 20 countries, including the USA and key markets in Europe.⁶⁵

Ocean Trawlers reported a turnover of US\$384.4 million in 2014, an increase of 29 per cent on the previous year. The UK overtook the rest of Europe as the company's largest market in 2014.⁶⁶ According to one estimate, Ocean Trawlers supplies some 20 per cent of the cod and haddock sold by the UK's fish and chip shops and 12 per cent of the chilled cod and haddock sold by the country's supermarkets.⁶⁷

OTHER BARENTS SEA CUSTOMERS

Icelandic Group and **Young's Seafood** are also major buyers and processors of white fish from the Barents Sea. Between them they supply customers including the food service sector and major retailers in the UK as well as other European countries, the USA and China, under their own or their customers' brands.⁶⁸

Other fish brands sourcing cod from the Barents Sea include **High Liner Foods** (sold in Canada and the USA), **Findus** (sold in Europe), **Iglo** (sold in Europe) and **Birds Eye** (sold in Europe and China).⁶⁹ The last three were recently acquired by **Nomad Foods Group**, which is currently leading the frozen food sector in Europe.⁷⁰

Fish buyers in these sectors expect a fishery described by the industry as the most sustainable in the world to be free from links to Arctic destruction. Instead, those buying cod from the Barents Sea risk having their supply chain tainted by it.

For the fishing industry itself, the environmental impacts that trawling is beginning to have on the pristine Arctic should be a cause for great concern and should prompt urgent preventive action.

'SUSTAINABLE' SEAFOOD MUST NOT DESTROY THE ARCTIC



Polar Bear (*Ursus maritimus*)



Narwhals (*Monodon monoceros*)



Walrus (*Odobenus rosmarus*)



Deepwater white coral (*Lophelia pertusa*)

MARINE RESERVES — AN IDEA WHOSE TIME IS LONG OVERDUE

Compared with the establishment of nature reserves on land, the designation of areas for the protection of the marine environment is a relatively recent development. Some individual countries and regions designated marine protected areas (MPAs) in the early 1980s, but it was not until the early years of this century that these efforts began to be coordinated globally.

The process to establish MPAs began in 2002 when the World Summit on Sustainable Development set a global target to establish 10 per cent of the sea as MPAs by 2012.⁷¹ In 2003, the fifth International Union for Conservation of Nature and Natural Resources (IUCN) World Parks Congress in Durban, South Africa, recommended that the international community as a whole establish by 2012 a global network of effectively managed, representative marine and coastal protected areas, consistent with international law and based on scientific information, and amounting to at least 20–30 per cent of each habitat type.⁷²

In 2008 the ninth Conference of the Parties to the Convention on Biological Diversity (CBD) adopted a set of scientific criteria for identifying Ecologically or Biologically Significant Marine Areas (EBSAs) in need of protection in open-ocean waters and deep-sea habitats. The intention was that in areas found to meet the criteria enhanced conservation and management measures should be considered, and that these could be

implemented through a variety of means, including the designation of MPAs.

However, in 2010 the parties to the CBD agreed, as the eleventh of the convention's new Aichi Biodiversity Targets, to conserve by 2020 a mere 10 per cent of coastal and marine areas, 'especially areas of particular importance for biodiversity and ecosystem services, through effectively and equitably managed, ecologically representative and well connected systems of protected areas'.⁷³

In 2014, at the sixth World Parks Congress, participants argued that the 10 per cent target was not ambitious enough and insisted that the MPA network should include at least 30 per cent of each marine habitat globally, with the ultimate aim of creating a fully sustainable ocean, at least 30 per cent of which had no extractive activities taking place.⁷⁴

This last point is of particular importance. Designation of areas free from extractive activities, including fishing, is vital for the long-term future of the oceans' biodiversity, as it provides sanctuaries for populations of species directly or indirectly affected by such activities. This function is enshrined in the concept of the marine reserve, a highly protected form of MPA off-limits to all extractive and destructive uses. These are increasingly being acknowledged as a versatile and powerful tool for the conservation of ocean life, and may also benefit fisheries by promoting recovery of exploited stocks.

However, for all the urgency expressed in international fora, actual progress towards the



Black legged Kittiwakes (*Rissa tridactyla*) and Ice in Svalbard

© Gabbig / Greenpeace

designation of MPA networks – and in particular towards the establishment of marine reserves – has been poor, hampered by a lack of ambition on the part of national governments. A report published by the United Nations Environment Program (UNEP) in 2014 reported that a mere 3.4 per cent of the world's oceans were protected.⁷⁵ Only about 1.6 per cent enjoy the enhanced protection of a marine reserve designation.⁷⁶

URGENT ACTION NEEDED IN THE ARCTIC

As the evidence of impacts makes clear, it is a matter of urgency that governments stop the expansion of fisheries and other extractive industries into previously ice-covered areas of the Arctic Ocean, not only within the international waters of the central Arctic, but also within the Exclusive Economic Zone (EEZ) of Arctic coastal states. It is also vital to establish an ecologically coherent, pan-Arctic network of MPAs and marine reserves.

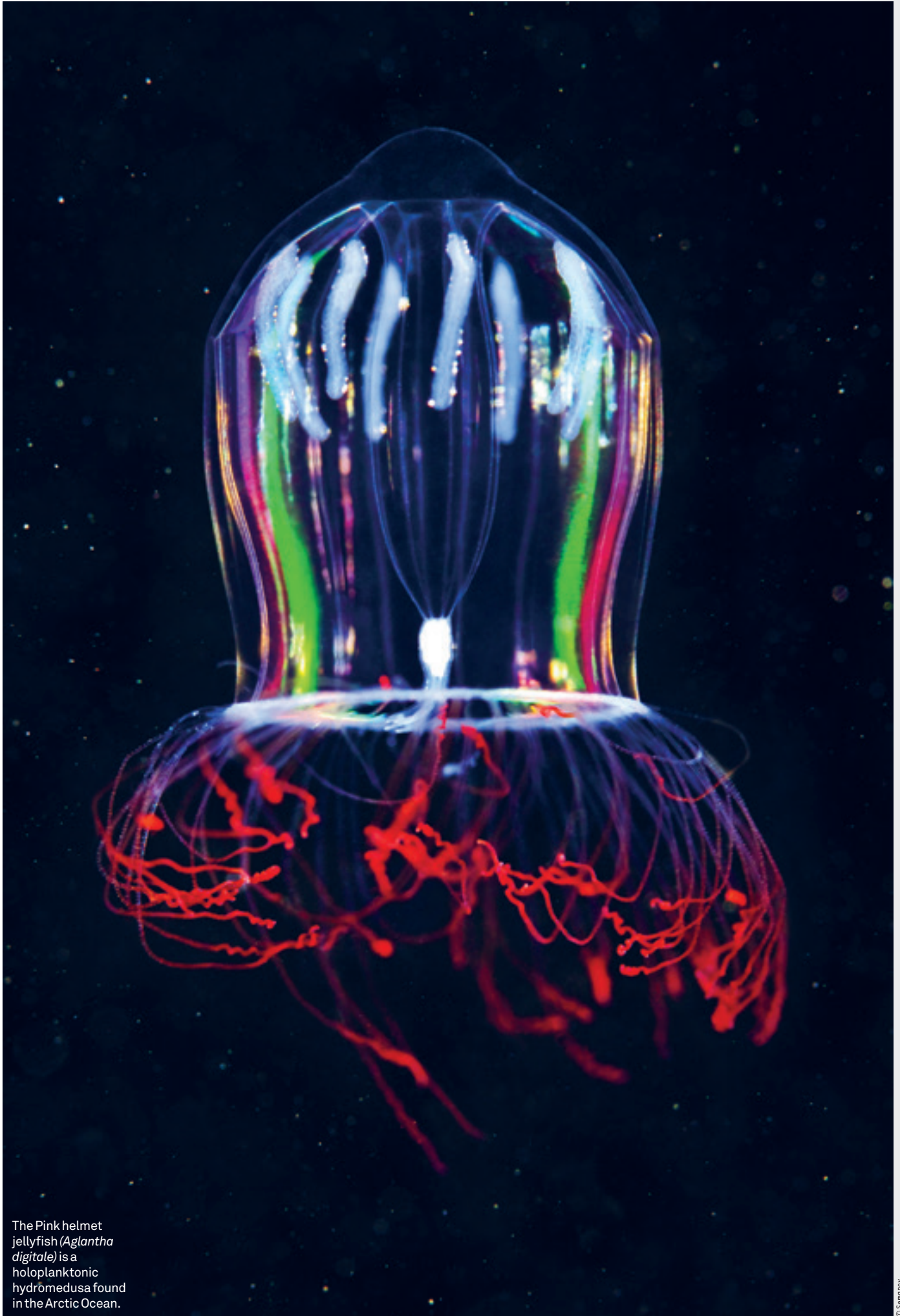
In the short term, countries should cooperate and utilise existing mechanisms and regulatory frameworks to protect EBSAs identified under the CBD EBSA process. Countries should work towards the creation of a sanctuary in the international waters of the central Arctic Ocean that is closed to all industrial extractive activities – including fishing.

Norway is a long way from meeting even the unambitious CBD target of protecting 10 per cent of its sea area. According to figures collated by the Marine Conservation Institute and published on its MPAtlas website in February 2015, Norway has 3.29 per cent of its EEZ included in 1,115

MPAs.⁷⁷ It is not clear what percentage, if any, is covered by marine reserves.

In 2011, following on from the tenth Conference of the Parties to the CBD, an IUCN/Natural Resources Defense Council (NRDC) Workshop to Identify Areas of Ecological and Biological Significance or Vulnerability in the Arctic Marine Environment⁷⁸ identified an area encompassing Svalbard, Franz Josef Land and Severnaya Zemlya and the waters around and between them as containing high biological values, meeting most of the EBSA criteria, and selected it as a 'Super EBSA',⁷⁹ naming it the 'High Arctic Islands and Shelf Super EBSA'. The area thus defined includes the north-western Barents Sea adjoining Svalbard, and the report of the workshop singles out 'the marine area around Northeast Svalbard' as of particular conservation significance. Other Super EBSAs included areas near the coasts of Greenland, Canada and Alaska, and around the Bering Straits.⁸⁰

However, in spite of the scientific consensus on the global importance of the north-western Barents Sea and its vulnerability to a combination of direct climate change impacts and expanding fisheries as the sea ice recedes, the area remains unprotected and increasingly at risk. As the waters around Svalbard are under Norwegian jurisdiction, the Norwegian government is in a position to protect this vulnerable area before its ecosystem is destroyed. But it must act fast, as every summer season sees the threat grow more serious.



The Pink helmet jellyfish (*Aglantha digitale*) is a holoplanktonic hydromedusa found in the Arctic Ocean.

GREENPEACE URGENTLY CALLS ON:

THE NORWEGIAN GOVERNMENT TO:

1. Stop any fishing in that part of the Barents Sea portion of the Svalbard FPZ that falls within the High Arctic Islands and Shelf Super EBSA.
2. Immediately establish this area as a marine protected area off-limits to all extractive uses, as part of Norway's fulfilment of its CBD commitment to protect a minimum of 10 per cent of its sea area by 2020 and as a contribution to the wider protection of the Arctic marine ecosystem.
3. Actively support the establishment of a sanctuary in the central Arctic Ocean and a network of MPAs in the Arctic, through the Arctic Council, the OSPAR Convention and other international fora that work for the protection of the marine environment.

FISHING COMPANIES OPERATING IN THE BARENTS SEA TO:

1. Stop all fishing in that part of the Barents Sea that falls within the identified Super EBSA.
2. Support Greenpeace's call for the Norwegian government to create an MPA off-limits to all extractive uses in its portion of the Super EBSA.
3. Sign the Arctic Declaration (see box).

COMPANIES BUYING FISH OR FISH PRODUCTS ORIGINATING FROM THE BARENTS SEA TO:

1. Phase out suppliers that continue to engage in fishing operations in that part of the Barents Sea that falls within the identified Super EBSA, or who source fish or fish products from that area, and verify that their remaining suppliers are neither fishing in nor sourcing fish from that area.
2. Support Greenpeace's call for the Norwegian government to create an MPA off-limits to all extractive uses in its portion of the Super EBSA.
3. Sign the Arctic Declaration.

THE ARCTIC DECLARATION

The International Declaration on the Future of the Arctic is a charter for Arctic protection, and a tool to reflect the concern of global civil society about the Arctic crisis.

For more information, see www.arcticdeclaration.org.

TACKLING ILLEGAL FISHING - A SUCCESS STORY



Svalbard, Norway.

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Globally, cod fisheries have had a grim history of overfishing. Between 1970 and 2002 the annual worldwide catch of Atlantic cod (including the Barents Sea stock) fell from 3.1 million tonnes to 890,000 tonnes – a decline of over 70 per cent.⁸¹ While the best-known instances of collapsing stocks are the Grand Banks fishery off Canada's east coast and the North Sea fishery, the Barents Sea cod stock has also been affected, with scientists ringing alarm bells about significant levels of illegal fishing. As recently as 2005 about one-fifth of all cod caught in the Barents Sea was fished illegally.⁸² The problem was so severe that it threatened the future of the entire fishery by increasing the overall take so far beyond the scientifically agreed quotas that a population collapse was imminent.

In 2006 a Swedish documentary team working in collaboration with Greenpeace and WWF uncovered links between the massive illegal fishery in the Barents Sea and Western food brands, pinpointing several well-known consumer companies with direct links to the illegal operations. As a consequence, fish processors came together on their own initiative to adopt new control instructions for the purchasing of Barents Sea cod that would enable them

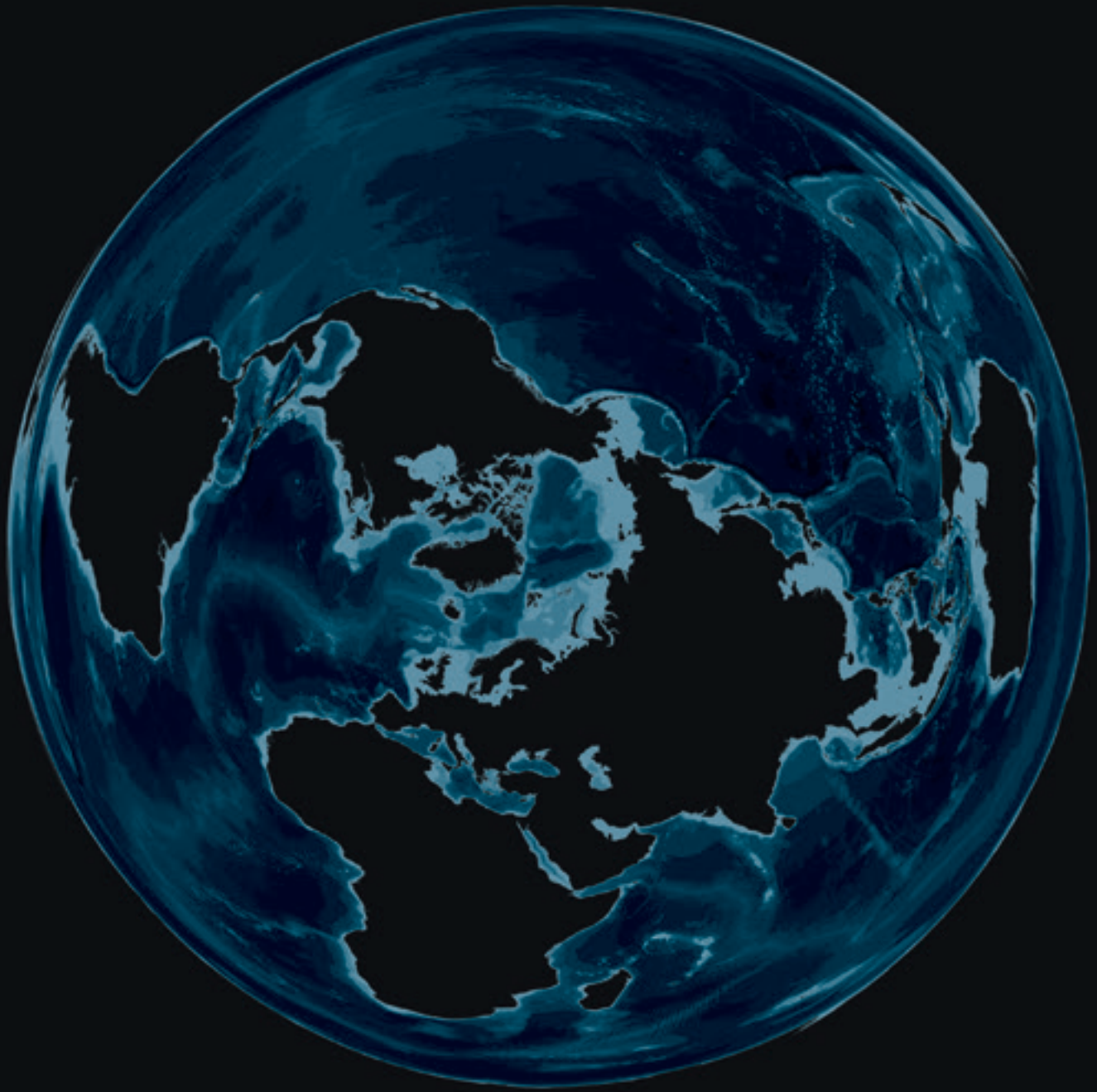
to verify that fish had been legally caught and deducted from the overall quota. This industry commitment provided an impetus for the subsequent agreement by Norway and Russia to introduce regulatory changes, increase cooperation on enforcement and improve fisheries management in order to eliminate the illegal operations. As a result of these steps, illegal fishing was effectively stopped within two years. From 2006 there has been a steady increase in cod numbers in the Barents Sea, due both to the ending of illegal fishing and to the introduction of new management plans with strict harvesting controls, as well as to favourable climatic conditions. The Barents Sea cod fishery is now the world's largest cod fishery and the stock is at a record high, with Barents Sea cod enjoying a reputation as one of the most sustainable seafood choices globally.

The great lesson of the Barents Sea is that the seafood processing industry, along with consumer-facing companies, can be a key driver for change and that when action by industry is followed up with regulatory and enforcement action by governments, formidable challenges can be overcome for the benefit of all.

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